Montana Fish, Wildlife & Parks

1400 South 19th Avenue
Bozeman, MT 59718

December 5, 2016

Ladies and Gentlemen:

The enclosed decision notice is for the proposed cessation of stocking Rainbow Trout into Hebgen Reservoir. The proposed action is based on numerous evaluations of hatchery Rainbow Trout survival and contribution to the fishery in Hebgen Reservoir. Most recently, analyses indicated that only 13% of the fish sampled in Hebgen Reservoir were from a hatchery origin. Multiple high-quality spawning streams exist upstream from Hebgen Reservoir. FWP proposes to cease stocking because of the low contribution from hatchery fish, the abundant high quality spawning habitat and costs associated with hatchery production and stocking.

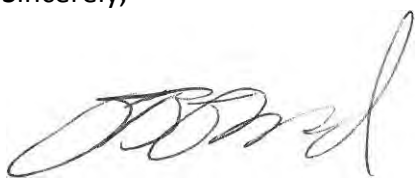
Montana Fish, Wildlife and Parks is required by the Montana Environmental Policy Act (MEPA) to assess significant potential impacts of a proposed action to the human and physical environment. In compliance with the Montana Environmental Policy Act, an Environmental Assessment (EA) was prepared and circulated for public comment from September 29, 2016 to November 2, 2016. A scoping letter, which included a project summary and link to the EA, was mailed to 86 landowners with property adjacent to Hebgen Reservoir. Other concerned citizens, conservation groups, non-governmental organizations, governmental organizations, and tribal governments were also informed of the EA. A public meeting was held on November 17th at the Holiday Inn, West Yellowstone, MT. Copies of the EA were made available at the State Library in Helena, the FWP Region 3 Headquarters in Bozeman MT, and the Montana Fish, Wildlife & Parks web site. Thirteen written comments were received on the EA, and two citizens attended the public meeting in West Yellowstone.

Based on the Environmental Assessment, the public comments received, and the benefits and risks associated with this project, it is my decision to go forward with the proposed action of ceasing stocking of Rainbow Trout into Hebgen Reservoir. I find there to be no significant impacts on the human and physical environment associated with this project; therefore, I conclude that the Environmental Assessment is the appropriate level of analyses, and that an Environmental Impact Statement is not required.

Questions regarding this Decision Notice should be mailed to:

Dave Moser
Montana Fish, Wildlife and Parks
1400 S. 19th Ave
Bozeman, MT 59718
Or e-mailed to: davemoser@mt.gov

Sincerely,



Sam B. Sheppard
Region 3 Supervisor

Montana Fish, Wildlife & Parks

Notice of Decision

Management of Hebgen Reservoir and its Tributaries as a Wild Trout Fishery

December 5, 2016

Project Proposal and Justification:

The proposed action is to cease stocking of Rainbow Trout in Hebgen Reservoir during 2017 (final stocking in 2016). Many efforts have been made to evaluate success of Rainbow Trout stocking in Hebgen Reservoir over the past 35 years. These studies have repeatedly shown that a majority of the Rainbow Trout in Hebgen Reservoir are derived from wild sources and natural reproduction from the tributaries that feed Hebgen Reservoir - e.g., Grayling, South Fork Madison, and Duck creeks. Past studies using hatchery marks and examination of fin erosion—both error prone tests—suggested that 9% to no more than 20% of the Rainbow Trout in Hebgen Reservoir were of hatchery origin. A definitive look at hatchery contribution of Hebgen Reservoir Rainbow Trout was conducted in 2014 (Stewart and Duncan 2015). Based on identifiable ratios of chemical elements in tributary streams, hatcheries, and otoliths (inner ear bone) collected from fish in Hebgen Reservoir, approximately 13% of captured fish (angling and nets) were traced back to hatchery origin.

Numerous studies including a comprehensive effort in 2009 all indicate that spawning, recruitment, and rearing in Hebgen Reservoir tributaries is ample to support a harvestable Rainbow Trout fishery. Moreover, Watschke (2009) found that 80% of Rainbow Trout spawning occurred in two of the 11 tributaries (Duck Creek and the South Fork of the Madison River) that feed Hebgen Reservoir. These tributaries provide abundant spawning habitat as well as diverse rearing habitat for multiple life histories of juvenile Rainbow Trout. Rainbow Trout "Young of the Year" production estimates exceeded 4.7 million in 2002 and 2003 combined. Additionally, abundant YOY and age-1 and age-2 juvenile Rainbow Trout were captured during spring and summer outmigrations in these tributaries.

The conversion from trout stocking to self-sustaining wild trout fisheries has been a cornerstone of trout management in Montana streams for the past 40 years. The transition to wild trout management occurred largely as a result of studies conducted on the Madison River and O'Dell Creek from 1967 through 1972. This research revealed that stocking of catchable trout had apparently substantial negative effects on wild Brown Trout and Rainbow Trout populations (Vincent 1987; Montana Outdoors 2004). Hatchery stocks can have negative effects

on wild populations in several ways. The presence of hatchery stocks can lead to hybridization, genetic contamination (affecting locally adapted gene complexes), and increased competition for food and space (Hindar et al. 1991; Krueger and May 1991; Waples 1991). Stocking may also lead to increased predator attraction and disease transmission (White et al. 1995), displacement of wild fish (Mesa 1991; McMichael et al. 1999), and can result in declines in wild populations through competition for spawning and rearing habitat (Kostow et al. 2003).

Finally, Hebgen Reservoir exhibits characteristics of an oligotrophic system with limited production of food resources for trout - gill netting has shown that years where larger numbers of subcatchable trout were stocked corresponded with 35% fewer fish greater than 16 inches in length after 3 and 4 years.

Given the special nature of Hebgen Reservoir, its opportunities for tributary spawning, the confirmed low return to creel and gill nets of hatchery fish, and the cost to licensed anglers, Montana Fish, Wildlife & Parks proposed cessation of hatchery stocking in Hebgen Reservoir. This management action would be closely monitored to ensure the fishery remains consistent or improves. If declines are observed in the Rainbow Trout fishery, FWP would consider returning to some level of stocking Rainbow Trout in future years.

The 3 alternatives considered were:

1) Cease stocking subcatchable trout in Hebgen Reservoir in 2017 (approximately 100,000 to 200,000 sub-catchable fish). Monitor populations in Hebgen Reservoir using gill nets set at historic locations. Evaluate angler satisfaction through a creel survey in three to four years.

2) Reduce stocking in Hebgen Reservoir to a lower level (e.g., 50% or 25% of the current stocking rate). Monitor populations in Hebgen Reservoir using gill nets set at historic locations. Evaluate angler satisfaction through a creel survey in three to four years.

3) No action, continue stocking Rainbow Trout annually (approximately 100,000 to 200,000 sub-catchable fish).

Alternative 2 would be unlikely to improve the fishery in Hebgen Reservoir for several reasons, reduced stocking would make it impossible to evaluate negative impacts of stocking, including, continued competition for resources and unwanted genetic impacts to established wild fisheries. Moreover, return to creel for stocked fish would necessarily be much lower than the current 9 to 13%, with very little benefit to the angler. Under this alternative, fixed monetary costs – i.e., transportation and planning – would continue to be a burden to license holders with negligible return to the creel. Because of these factors, “Alternative 2” was not selected as the Preferred Alternative.

Alternative 3, status quo management of Hebgen Reservoir fish stocking would not be based on the best available science. Given the preponderance of data indicating Hebgen Reservoir Rainbow trout naturally thrive and reproduce, stocking efforts make little sense biologically or fiscally. Should new data or other evidence indicate the Rainbow Trout fishery is not performing as anticipated, stocking could be resumed at a similar or different level. Because of these factors, "Alternative 3" was not selected as the Preferred Alternative.

The goals and predicted benefits of Alternative 1 are:

- Maintain the current opportunity to catch wild trout in Hebgen Reservoir that have spawned naturally—a cornerstone of wild trout management in streams since the early 1970's.

- Maintain numbers of Rainbow Trout and Brown Trout in Hebgen Reservoir (monitor with gill netting and creel surveys).

- Potentially increase average size of Rainbow Trout in Hebgen Reservoir through reduced competition for space and food.

- Promote natural spawning migration through elimination of hatchery selected fish.

- Reduce costs associated with propagation of hatchery stocks that return to creel at very low rates.

Public Involvement:

In compliance with the Montana Environmental Policy Act, an Environmental Assessment (EA) was prepared and circulated for public comment from September 29, 2016 to November 2, 2016. A scoping letter, which included a project summary and link to the EA, was mailed to 86 landowners with property adjacent to Hebgen Reservoir. Other concerned citizens, conservation groups, non-governmental organizations, governmental organizations, and tribal governments were also informed of the EA. A public meeting was held on November 17th at the Holiday Inn, West Yellowstone, MT Copies of the EA were made available at the State Library in Helena, the FWP Region 3 Headquarters in Bozeman MT, and the Montana Fish, Wildlife & Parks web site.

Thirteen written comments were received on the EA. Two citizens attended the public meeting in West Yellowstone – both were in favor of the proposed action.

Of the 13 written comments 6 were in favor of the proposed action.

One comment was in favor of the action as long as the fishery is monitored for changes in abundance. One comment requested monitoring of changes in the ratio of Brown Trout to Rainbow Trout.

Response: Montana Fish, Wildlife & Parks will continue to monitor numbers of fish and proportions of fish through the use of gill nets annually and a creel census in 3 to 4 years. Montana Fish, Wildlife & Parks anticipates cessation of Rainbow Trout stocking will not lead to Brown Trout being the dominant fishery in Hebgen Reservoir. Montana Fish, Wildlife & Parks is committed to monitoring any changes in the Hebgen Reservoir ecosystem with the goal of maintaining a vital recreational fishery.

One comment requested that tributaries be closed to fishing if stocking is halted.

Response: The Fish and Game Commission recently approved a regulation change closing the three primary spawning tributaries – Duck, South Fork Madison, and Grayling creeks to fishing during the peak of Rainbow Trout spawning. In future, if new data warrants, Montana Fish, Wildlife & Parks could propose additional restrictions or lift restrictions on timing of fishing.

One comment referred to attempts to increase stocking of Rainbow Trout in the late 80's and early 90's. The comment concluded that fishing was better for 8 to 10 years after these stocking efforts.

Response: The EA states …" In 1987 and 1988 over ½ million fish were stocked in Hebgen Reservoir. The result of this much increased fish stocking was in some years higher numbers of fish per net gill net set, but also resulted in a 35% decrease in larger fish 16 to 19 inches in length with a concomitant increase in numbers of fish less than 15 inches. In years where greater numbers of subcatchable rainbow trout were stocked, relative size of Rainbow Trout decreased substantially (1993-1995, 2008) Hebgen Reservoir productivity has been monitored for many years and remains limited in its ability to provide food for fishes (Travis Lohrenz, Montana Fish, Wildlife & Parks, personal communication). The development of natural reproduction in multiple tributaries to Hebgen has likely reached a point where the Rainbow Trout fishery is much more stable/resilient and at carrying capacity."…

Montana Fish, Wildlife & Parks frequently manages harvest regulations and stocking efforts to maintain trophy fisheries while still providing good numbers of harvestable fish in more abundant yet smaller size classes. All of the data collected from Hebgen Lake indicates it is likely at carrying capacity and currently supports a trophy trout fishery as well as ample numbers of Rainbow Trout greater than 16 inches in length. The fishery will continue to be monitored through gill net sets and a planned creel census in 3-4 years - stocking can always be resumed if necessary.

One comment recalled good fishing for 15” to 24” Rainbow Trout from 2000 to 2007. The commenter recalled about 50% of fish showed signs of fin erosion typical of hatchery fish.

Response: Fin erosion is found in Rainbow Trout stocked at catchable size. All stocking of Hebgen Reservoir in recent history has been limited to subcatchable trout less than 4” in length. Stocked fish would not show signs of fin erosion at lengths of 15” and greater. One consideration is that these fish were attempting to spawn on shore or had spawned in tributaries to Hebgen Reservoir. Through the act of building redds/nests in gravel trout can show signs of fin erosion.

Decision:

Based on the Environmental Assessment, public comment, and the preponderance of data collected over the past 35 years, it is my decision to proceed with Alternative 1, the proposed action. Alternative 1 involves cessation of stocking in Hebgen Reservoir and reliance on an already well established and dominant naturally reproducing population of Rainbow Trout. The Draft Environmental Assessment, together with this Decision Notice, will serve as the final document for this proposal. This alternative seeks to manage Hebgen Reservoir for wild trout - a cornerstone of fisheries management in Montana since the early 1970’s. Montana Fish, Wildlife & Parks will continue to monitor Hebgen Reservoir and maintain the popular recreational fishery that it supports. I find there to be no significant impact on the human or physical environment associated with this project. Therefore I conclude the Environmental Assessment is the appropriate level of analysis, and that an Environmental Impact Statement is not required.

Date: 12/5/2016

Sam B. Sheppard
Region 3 Supervisor
Bozeman, Montana